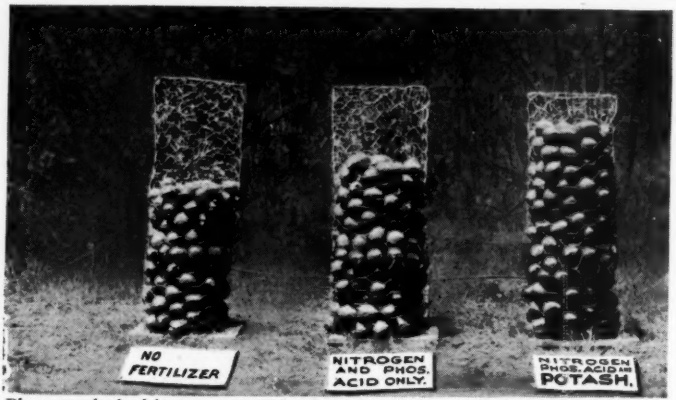
Better Crops

The Pocket Book of Agriculture.

September 1925 10 Cents

remiums for Protein -- Why Upset the Export Apple Cart? --
Agricultural Developments -- in this issue.



Photographed of lemons grown by J. C. Davidson of Chula Vista, California

81 extra boxes *per* acre

by using a complete mixed fertilizer

THE application of plant foods to your soil is just as essential as the application of food to your body. In each case, sound common sense must be used.

J. C. Davidson of Chula Vista, California, applied a complete mixed fertilizer containing 3% nitrogen, 8% phosphoric acid, and 12% potash to his lemon trees, at the rate of 1000 lbs. per acre. Soil was sandy loam.

The result was, an extra yield of 81 boxes per acre.

This extra yield was entirely due to potash, for on an adjoining plot, Mr. Davidson applied the same quantity of nitrogen and phosphoric acid, but no potash; and his yield was 81 boxes less per acre.

The above photograph taken in Mr. Davidson's grove, shows you the proportionate yields—but it doesn't show you the big improvement in quality. Remember that potash in a balanced ration helps to produce smooth, firm fruit of good size.

Try a well-balanced fertilizer on your lemon trees this Fall—use a mixture which gives each tree about 2 lbs. of potash. Or, experiment with different mixtures as Mr. Davidson did, in this way, you can prove to yourself that Potash Pays.

POTASH IMPORTING CORPORATION OF AMERICA
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Better Crops

The Pocket Book of Agriculture

VOLUME V. NUMBER ONE

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R. H. Stinchfield

Looks *you* in the eye

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VOL. V NEW YORK, SEPTEMBER, 1925 No. 1

Gentlemen— Meet the Editor

WITH this issue a new editor comes to BETTER CROPS. We feel most fortunate in having been able to prevail upon R. H. Stinchfield to fill the chair of honor on our editorial staff. He comes to us from the Middle West—a real farmer, born and raised on a dairy farm in Wisconsin.

Stinchfield is thoroughly trained in agriculture and in agricultural journalism. He has handled the press services of the Wisconsin College of Agriculture, has contributed feature material for the farm pages of the Milwaukee Journal, and has done considerable writing for the Breeder's Gazette and other representative farm publications. He has a clear understanding of the problems confronting the farmer and the extension worker.

After service in the World War, Stinchfield graduated from the four year course in agriculture at the University of Wisconsin. This scientific training gives him a contact with the research men, while his journalism experiences have had a broadening influence, giving him a sympathetic understanding of the purely commercial side of agriculture.

He is a member of Alpha Gamma Rho, Sigma Delta Chi—national honorary journalistic, and Alpha Zeta—national honorary agricultural fraternities.

Stinchfield knows that his job is no sinecure, but he feels that with the wholehearted support and cooperation of y o u who read BETTER CROPS the work will be pleasant, and your constructive criticism will stimulate him to make each succeeding issue of the magazine more helpful and more interesting.

Premiums

¶ Mr. Chew tells why they often slip through the farmer's fingers.

WHAT does the average farmer know about the "protein content" of wheat? Probably just about enough to make him mad. He is likely to be aware that protein in wheat is what makes this grain the chief source of supply for bread, that bakers demand a definite protein proportion in flour, and that millers in consequence when buying wheat on sample in the large grain markets often pay a premium for protein which the farmer does not get. What the average farmer does not know is that the problem of getting the protein value of wheat fairly reflected in the price paid to the grower is an extraordinarily difficult one, which has vainly taxed the resourcefulness and ingenuity of marketing experts for many years.

Because no way has yet been found for guaranteeing to the farmer a price for his wheat corresponding to its protein content, it is sometimes urged that the less said in print about the matter the better. Why get the farmer all stirred up about a problem unless it can be solved, it is asked? It has been suggested that it will be time enough to make farmers discontented with the present method of marketing wheat without measuring its protein content when the technical obstacles to doing so have been overcome.

Two answers to this objection are ready to hand, both amply sufficient. The first is the familiar general principle that the first step toward solving any problem is to state it. Of course this particular problem of how to get the protein value of wheat reflected in the price paid to the grower is clear enough in the minds of millers and bakers and chemists and technical experts. But it is not clear in the minds of farmers. And since farmers have the strongest motive for wanting it solved, it may be that when they understand what is necessary they will beat the technicians and the marketing experts to a solution.

THE other reply to doubts as to the wisdom of ventilating the problem is that thousands of farmers are already excited about it and for lack of information are seeing it in a wrong light. Every meeting of wheat growers is an occasion for discussion of the "protein content" problem. Much of the criticism directed against the Federal wheat grades in the last few years has been based on the fact that these grades do not include protein content in their requirements. Farmers are not ignorant of the fact that while terminal prices for wheat reflect quite accurately variations in the quality of wheat, local

For Protein

By Arthur P. Chew
U. S. Department of Agriculture.

prices often do not. They fully understand that unless they know the milling value of their wheat, they can not successfully bargain to get the best price for it. More rather than less discussion of the question seems to be the real need.

This, at any rate, is the position officially taken by the Department of Agriculture. In its 1923 Year Book, in an article on The Wheat Situation, (page 129) the department has the following to say about the protein problem: "In recent years wheats of high gluten (or protein) content and quality have commanded special premiums. On the Kansas City market car lots of hard winter wheat grading No. 2, 3, or 4, but of high gluten content or quality, often sell above No. 1 for the same day. Even car lots grading No. 5 occasionally bring the highest price for the subclass. For a recent day on that market when No. 1 Hard Winter was quoted at $1.18, the highest quotation for No. 4 was $1.16 and for No. 5 $1.19. The producer as a rule does not know the gluten content of his wheat, and may hence be at a considerable disadvantage in making his sale to the local buyer. Special efforts should be made by producers to acquaint themselves better with the market value of their wheat."

Naturally the injury suffered by the farmer because wheat is not appraised for its protein value at country shipping points has been exaggerated. Millers buy wheat largely on the basis of its protein content as well as on the basis of its commercial grade. But it is not usual for them to buy direct from the farmer. Their purchases are mostly made after wheat has arrived at terminal markets and has been tested for protein. When farmers learn tnat wheat of the same grade as their own but of high protein content is commanding a premium of 3 or 4 cents, which is pocketed by the dealer, they suppose that such cases are typical. Such price spreads are in fact exceptional. Nevertheless the farmer undeniably has warrant for desiring better means of appraising the protein value of his wheat.

WHERE the trouble lies is in the fact that testing wheat for protein requires the use of highly technical chemical methods and expensive complicated apparatus. Farmers therefore can not readily test wheat for themselves. Moreover, it is apparently not practicable at this stage for country grain buyers to determine the protein content of wheat. Indeed, country buying of wheat is usually not even done on a basis of a strict determination of its

commercial grade. Wheat buyers purchase wheat on a basis of what they think it will grade at the terminal markets. If their estimate is too favorable, they lose; if it is too unfavorable, the farmer loses. Competition among buyers for supplies of wheat tends to bring about an approximation between its value at country shipping points and its value at terminal markets, but the agreement is not exact. It is therefore obvious that much improvement in buying methods is necessary before a factor so hard to estimate as protein content will play its due part in determining the price of each load of wheat delivered at the country elevator.

Many farm papers and grain trade publications have suggested that the protein content of wheat should be incorporated as a factor in the Federal wheat grades. Though the Department of Agriculture believes the farmer is entitled to the premiums that his wheat brings on the score of quality in the terminal markets, it is not as yet prepared to make the protein content a grading factor. "It would not be in the interest of producers to do this," says H. J. Besley, head of the department's grain standards division, "because country buyers could not determine the amount of protein in wheat which individual farmers deliver for sale and consequently could not reflect terminal market prices to farmers on a protein basis." Yet the department has not given up the problem as one that can not be solved. On the contrary there is no wheat marketing problem which it is more diligently studying.

Meantime, it should not be supposed that the protein content of wheat plays no part in the price paid for it at country shipping stations. "Map buying" by millers has done something to correct the difficulty. Since protein came to be highly prized in flour, millers have taken to sending scouts into various wheat producing regions in harvest time to prospect as it were for high protein wheat. These scouts furnish reports that enable millers to "map" the country for protein, and as a result the bidding for wheat is brisker in the good protein districts. But this proceeding has its limitations. The only way actually to know the protein content of wheat is to test each lot. Millers will not pay a premium for all the wheat delivered at a certain elevator, merely because some of the wheat obtained there has tested high in protein. To do that would be to establish a premium at that shipping point which would infallibly attract to it considerable supplies of wheat of inferior protein content. "Scouting" reveals the protein value of the wheat crop only in a very general way. Since an individual farmer may produce high protein wheat in a district where the general average is low, and vice versa, it is clear that "map buying" does not come very close to solving the real problem, which is to give the individual farmer the milling value of his own wheat.

A BETTER help to the farmer in obtaining a price for his wheat corresponding to its protein content is the Federal grain grading system, despite its acknowledged shortcomings in this respect. The Federal grain grades do not wholly ignore the protein content of wheat. In these grades the various classes of wheat are divided into subclasses, and the subclasses are divided into numerical grades. This division is based on the percentage contained of "hard and vitreous" kernels. Kernels of wheat that are hard and vitreous are higher in protein content than kernels that are soft

(*Turn to page* 36)

¶ In which Jeff tells us the whens, wheres and whys of waiting.

Waiting

By Jeff McDermid

WAITING calls for patience. And patience is anxiety turned wrongside out.

Man is an impatient animal—always anxious to see the end of the furrow before setting hand to the plow. Much progress has been made, I admit, by those who because they refused to wait have trod on to heights which more patient men fail to reach.

BUT there is much merit in merely waiting.

The cat who sits by the mouse-hole all night, every nerve tense, gets the mouse eventually. In quiet assurance, yet ready to spring at the psychological moment, she sits, sits, sits. The mouse must come out. It is only a question of time.

What could she learn of mouse-catching from the noisy terrier who excitedly scratches and yelps at the hole, warning the mouse of his presence?

Many marvelous maxims adorn this idea of patience. "Everything comes to him who waits," "Contain thyself," "Patience and fortitude conquer all things," to mention but a few.

ROSSEAU said, "All good literature is a confession," and I must confess that at least twice in my lifetime the inability to wait has cost me a million dollars.

Lest this sound like braggadocio mixed with remorse let me hasten to add that I do not use the word "million" in a figurative, but in a strictly literal sense. Twice have I owned businesses or property worth a cold million real dollars which anxiety, impatience and exasperation tore from my hands and threw into another's lap.

YOU can learn more about honesty from a poacher than from a preacher—the poacher has seen its seamy side, has viewed it in reverse and in remorse. Caught, he can adorn a tale which points a moral clearer than any expounded by pulpit-pounding preacher. He knows, too late, the value of honesty.

From the actor you can learn more about drama than from him who occupies Seat 143, Row B, Parquet. The thespian sees the scenery from the rear.

And so you can learn more of

the merits of waiting from one who has not waited.

WE hear much about that unlovely, modern philological monstrosity, "stick-to-it-ive-ness." I think that one of the reasons I have several times failed to get the *granum salus* on the tail of The Bird is that the very sound of this wordy concoction was repulsive, repugnant, and pifflicus.

"Stick-to-it-ive-ness" is a word invented to define the art of working and waiting. To its inventor there seemed to exist no word which covered the thought he had in mind, so like some others including myself he invented one! As a philolo-inventor he is strictly Class D, Bum-in-ordinary and *Contra bonos mores.*

But the thought is good; and, as they say in Mental Science, "Anything is possible if you will just hold the thought!"

The idea of waiting—and while you wait, work—is not new.

There is nothing new in the mental world, though there are, I am told, a few new things in the physical world,—including the radio. But the device which will be invented ten years from now, I had in mind ten years ago! Everything that is to be is now in mind—all that remains is to work it out.

The thought is good—but old.

Don't mind waiting—and while you are waiting keep busy.

"To know how to wait is the great secret of success," claimed De Maestra, after a life which proved it.

And, Westinghouse, inventor of the automatic air-brake, sitting patiently in the anterooms of the money barons of his day, only to have them pass word down the line of secretaries, clerks and bufferinos that they were busy, knew how to wait.

He "contained himself," we now know, for seven years, feeling in his heart that he bore in his grip-sack the very thing that the money barons needed to add quick success to the railroad idea.

Too busy they were to realize that a train which won't start only induces grumbling on the part of a public prone to grumble anyway, that it causes little trouble, and no deaths; but that a train which cannot be stopped is like a Kansas cyclone, carrying death and destruction to all in its wake and unspeakable annihilation to those caught in its insatiable maw!

Too busy were they to investigate—to see that the bright-eyed Westinghouse had in his bag the death-knell of the hand brake and the birth certificate of rapid transit.

So, still patient, though not too much so, believing in moderation in all things, Westinghouse packed his idea and his ambition, and with tongue in cheek took it on the wing for England. Even a dog has sense enough to leave when ill-treated.

In England he was met with open arms. His wait was over, his patience rewarded, his troubles vanished.

IN our later generation, Knight, inventor of the sleeve-valve automobile engine, faced with the descendants of the money barons who were too busy to see poor Westinghouse, found that the breed had not improved with the decades—in fact that it was worse. Not only were they too busy but they added a sneer, a chuckle and a snort. The bug of modern intolerance had bitten them deeply—how they hated a new and revolutionary idea!

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The Use of Fertilizers in Indiana and Iowa

¶A short review of two important Agricultural bulletins by G. J. Callister.

A RECENT publication by the Agricultural Experiment Station, Lafayette, Indiana, gives some interesting results on the use of fertilizers in 1924. It shows that more plant food per ton was purchased by Indiana farmers in 1924 than in any previous year.

In 1921, for instance, the average amount of plant food in every ton of fertilizer sold was 349 pounds, but by 1924 the 349 pounds had increased to 484 pounds per ton.

This increase in the amount of plant food per ton decreased the cost from 9.1 cents per pound to 7.2 cents per pound.

An interesting illustration is shown under the heading—"MR. BUYER, DO YOU BUY OR ARE YOU SOLD FERTILIZER?" It is shown without any doubt that the careful buying of fertilizers by Indiana farmers will save them thousands of dollars.

Why not send for this bulletin? It is number 292, published in May, 1925, and written by O. S. Roberts, acting state chemist, O. W. Ford, M. H. Thornton, and L. E. Horat.

THE profitable use of commercial fertilizer is gradually spreading westward from the more intensive producing areas of the East.

It is interesting to note in this connection that the Agricultural Experiment Station of Iowa in March of this year issued a circular on the use of fertilizers. As stated by the authors, W. H. Stevenson and P. E. Brown, certain commercial fertilizers are needed on many Iowa soils and can be applied with profit. This statement is the conclusion reached as the result of extensive field work.

Ninety-four cooperative soil experiments are now being carried out by the soils section of the Agricultural Experiment Station in cooperation with farmers. These fields are located in counties where soil surveys have been completed.

One of the main ideas brought out by the authors is that field tests are the only sure way to learn soil needs. Apply a certain fertilizer and determine its effect on the crop. Full directions are given for selecting the location of the field test and the location of the plots, the fertilizers to be tested, and how and when to apply the fertilizers.

There is also a great deal of other valuable information on the nature of commercial fertilizers and their function in crop production under Iowa conditions. We feel that every farmer using fertilizer should obtain this circular, No. 97, read it and keep it for reference.

Crawford Directs Agricultural Information

By P. M. Farmer

ONE of the early moves of Secretary of Agriculture Jardine was the appointment of Nelson Antrim Crawford as Director of the Office of Information, which Office the Secretary reestablished in the Department as a more convenient and effective means for handling the information and publication work. For ten years Mr. Crawford has been connected with journalism and printing work at the Kansas State Agricultural College, and Dr. Jardine, who was President of the Institution much of that time, knew that he possessed the qualities necessary to improve these lines of work in the Department of Agriculture.

Mr. Crawford took up his new position under his old chief on May 1st, and has under his supervision all publication and printing work and the press service. Plans are that he shall give considerable attention to developing radio outlets for Department information. The radio method of distribution has been highly developed at the Kansas college and is greatly favored by the Secretary and Mr. Crawford.

The recreated Office of Information will also take in the coordination of informational activities of the various bureaus and offices, and the Director will conduct the business of the Department with the public printer and the Congressional Joint Committee on Printing, the Permanent Joint Conference on Printing and the administration of the regulations of the Department with respect to publication of articles.

The selection of Mr. Crawford to head this work for the Department of Agriculture is an indication of the consideration now given to the importance of proper preparation and distribution of the results of the Department's work. It was not many years ago when persons desiring information on the results of experimental work and other activities were expected to burrow industriously for it through the heavy clay of technical language and statistical tables. The method now in favor is the one which provides a mellow soil for the reader to work in for new scientific facts. The new organization also is designed to handle this phase of the Department's work with greater economy.

DIRECTOR Crawford came to the Department with a good background of successful work in teaching journalism and in carrying on information and publicity work. He has done much magazine and newspaper writing, including contributions to national magazines and is an active member of many journalistic organizations.

Mr. Crawford was born in South Dakota, received his B.A. degree at the State University of

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Better Crops' ART GALLERY of the month

Nelson Antrim Crawford is known as one of the foremost agricultural journalists of the country. When Secretary of Agriculture William H. Jardine wanted someone to direct information, Crawford was his first choice.

¶A drainage ditch was needed here.

Missouri County Drains its Mire

By Charles E. Brown

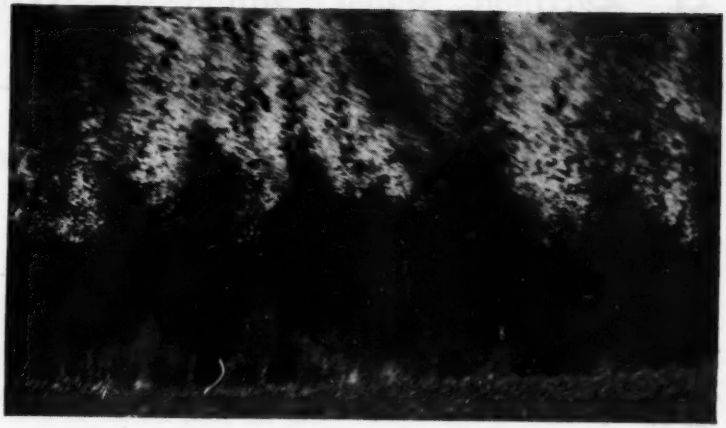
Farm Bureau, Carroll County, Missouri

CARROLL county, Missouri, recently showed its farmers how to make a drainage ditch on gumbo, a soil which would not hold up dredge boat or teams.

A ditch approximately 1,000 feet long, 8 feet wide at the top, and 3 feet deep was made at the demonstration meeting. Three hundred and eighty pounds of 60 per cent nitro-glycerine dynamite was used and approximately 500 cubic yards of dirt was moved. The total cost of making this ditch was $104.50, or slightly less than 21 cents per cubic yard.

This cost was distributed as follows: dynamite, $87.50; transporting dynamite to ditch, $2.50; caps and fuse, $1.00; labor, $13.50. There was really no labor charge on making the ditch because the farmers attending the demonstration meeting furnished the labor needed. We estimated what the labor would have actually cost an individual farmer in making the ditch on his farm.

In placing the dynamite one-half sticks were used in a double row. The one-half sticks were placed 14 inches apart in each row and the two rows ran parallel and were 16 inches apart. The dynamite was placed down in the ground about 15 inches. A two-inch piece of gas pipe with a pointed plug in the end of it was used for making the holes. After the dynamite was placed in the holes the holes were filled with water which took the place of tamping the holes with dirt.



¶ *Dynamite did the work.*

The one-half sticks of dynamite were set close enough together so that the concussion from the explosion of one whole stick was sufficient to set off all the dynamite placed. The ditch was made in three different sections. Only one cap and one fuse were required to set off the dynamite used in making each section.

The ditch made at this demonstration was a section of a drainage ditch which could not be opened at the time the balance of the drainage ditch was made because the ground was not solid enough to prevent the dredge boat from miring down. An attempt to open it with teams was also abandoned because the teams mired down.

The cost of moving the dirt in the balance of drainage ditch where the dredge boat and teams were used was approximately 40 cents per cubic yard. The ditch was made in soil classed as Wabash Clay and commonly called gumbo.

¶ *The ditch was completed in two hours.*

A Sermon That Impressed Me

By E. W. Howe

I KNOW of nothing more wonderful than the story of the bee; nothing in fiction equals it. I was most impressed lately, while reading a book on the subject, by a statement made by A. I. Root, an accepted authority. This worthy old veteran says the greatest enemies of the bee business are agents, propagandists, "pep" gentlemen, "live wires," etc. Mr. Root says that so far as his experience goes patent-hive men are worse enemies of the bee business than ants, bee-moths, birds, mice, parasites, wasps, toads and skunks.

All the natural enemies of the bee are here enumerated by a practical man, and then he declares that men with short cuts to prosperity are more harmful than all the natural enemies combined. Mr. Root further says he does not know a single patented feature of bee hives and implements (and there are hundreds of them) that would come into general use if the patent were removed.

And then Mr. Root makes the strongest and most surprising statement of all. "We have little to fear," he says, "from natural enemies of the bee, and it is an easy task to keep them down, but from unprincipled men we have much to fear."

Life is much like the bee business. Its natural ills may usually be met and overcome, but we have much to fear from agents with patent contrivances for making it easier. One of the most pitiful stories in print to-day concerns the great amount of money wasted every day on short cuts to fortune. Perhaps a third or half our savings are wasted in foolish investments. Agents have become so numerous that they are a pronounced nuisance, and most of their schemes are dangerous. In Miami, Florida, 18 agents were arrested lately in an hour, for street soliciting, and the police believed all of them to be dishonest men. It is becoming nearly that bad in every other part of the country.

Meanwhile those who attend to their business naturally, as the bees do, prosper in the United States as nowhere else. Those who feed their land, instead of agents; those who improve their own premises, instead of the premises of others, and work hard and behave, have no trouble in getting along, particularly if they mix a little common sense with their industry.

There is a very good moral in this reference to the bee business by A. I. Root, a worthy and intelligent man who became an accepted authority in the profession.

Mr. Root's sermon greatly impressed me, and I here attempt to pass it on; in the future agents will find me less easy.

Why Upset the Export Apple Cart?

By Frank George

United States Department of Agriculture.

¶An interesting account of American apples abroad.

A VIRGINIA apple grower back in 1841 sent a gift package of Albermarle Pippins to Queen Victoria. The Royal Lady liked the fruit so well that similar gifts were made annually to the Court of England, and a commercial demand for American apples spread throughout the Kingdom.

This demand increased steadily to the extent that Great Britain now buys some 1,500,000 barrels of American apples a year. Shipments last year, in terms of barrels, reached the record total of nearly 3,000,000 barrels. The Continental markets also take large quantities of the fruit.

The volume of business is large, but the financial returns are not always satisfactory. Sizeable profits have been made by some American growers and shippers, but losses are frequently shown. The losses are attributed to glutted markets, failure to take account of foreign competition, disregard for consumer preferences, and the arrival of apples in damaged conditions due to bad packing.

Why upset this export apple cart, declare the Department of Agriculture foreign investigators, when it can be kept to the road and made invariably to return a profit? Why not, they ask, supply the market with regular shipments as indicated by the demands of the trade, and use other good marketing practices?

American growers and shippers until recently have had slight means of knowing the extent of the foreign demand and competition for apples, and the best marketing practices to pursue. Now, however, they have the services of experienced apple men, sent abroad by Uncle Sam to keep continuous watch over the foreign situation, and to report regularly on the markets.

The first step, according to these experts, should be the elimination of slack barrels, which represents one of the greatest wastes connected with the export marketing of barreled apples. Apples in such barrels are penalized with a heavy discount even when the market is under-supplied, and some Liverpool buyers will not take slack barrels at any price.

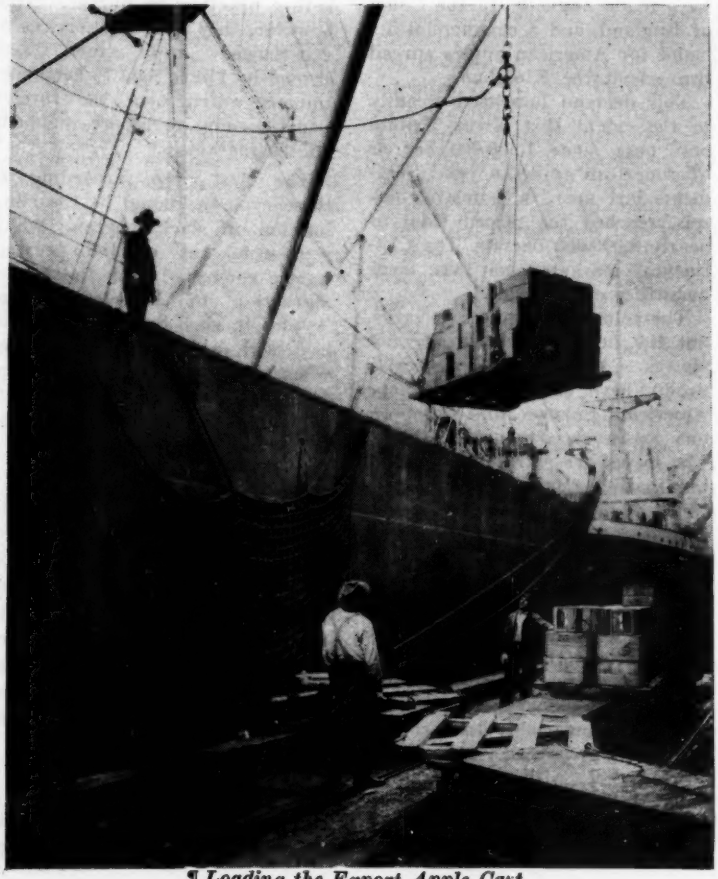
EXAMINATION of arrivals of York Imperials over a 2½ months' period showed that 37 per cent of the barrels were slack. These barrels are detected in the British markets by the brokers' "selectors," who are on the quay when the cargo is discharged, and who sound the barrels by tapping the heads of the barrels with a hatchet.

The causes of slack barrels are poor or weak barrels; poor packing; rough handling in the United

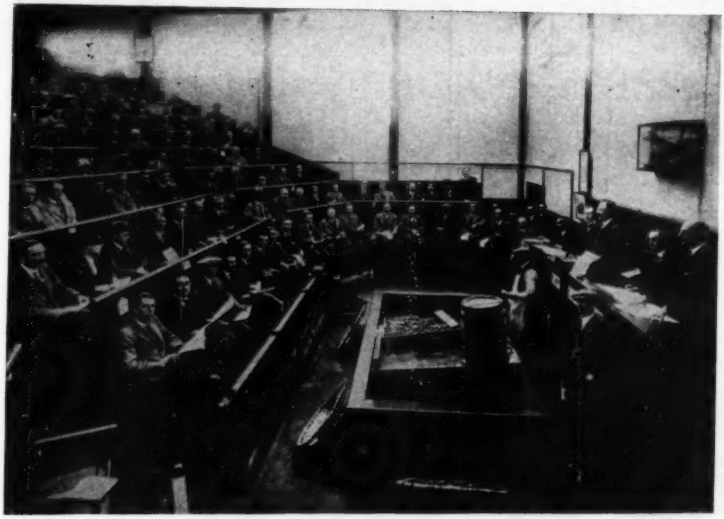
States; poor storing on board ship; rough handling by European stevedores, and weak or overripe fruit. Barrels with hoops that break or slip are certain to arrive slack. Virginia barrels are said to be the poorest that arrive on the Liverpool market.

GREATER care in selecting sound barrels is urged. Many slacks plainly indicate that not enough apples were put in the barrel. Special care is necessary also in shaking down barrels in which shredded oiled paper is used, because the paper may cause bridging. Refrigeration in transit is also recommended because this keeps the fruit firm and eliminates some slack barrels.

Most of the fruit sent to Great Britain is handled on consignment through auctions at Glasgow, Liverpool, Manchester, London, Hull and Southampton. Storage facilities at these places are inadequate, there is no disposition to re-sort the fruit, and the auction system has been necessary to provide a quick sales medium for handling the irregular volume of shipments.



¶ *Loading the Export Apple Cart.*



¶ *The Southampton auction is popular.*

There is no preference for boxed apples as against barreled fruit in the British markets, the main requirement being large apples for cooking purposes, and medium sizes such as 150s and 175s for dessert. The northern markets in Great Britain want both large apples and apples of the bright red varieties. Jonathans, York Imperials, Yellow Newtowns, Spitzenbergs, Baldwins, and Ben Davis are all in demand.

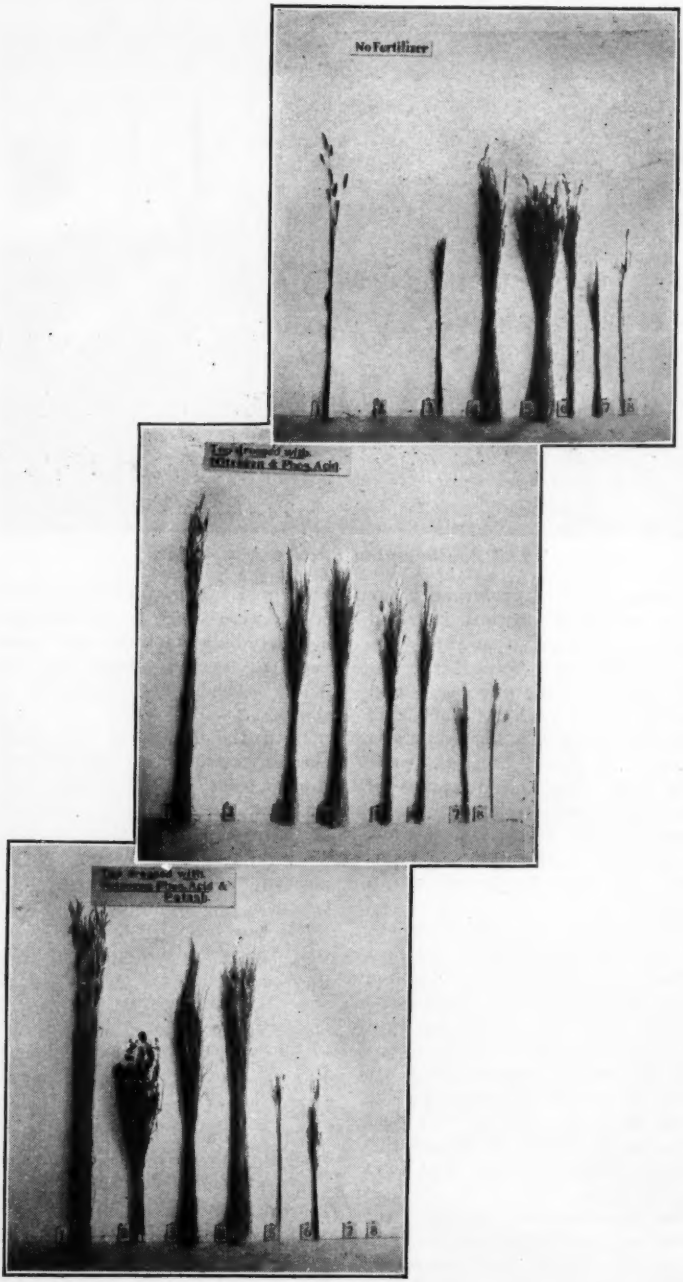
The Glasgow and Southampton auctions are regarded as the best outlets, and the auction at London as being the least satisfactory. Glasgow has direct shipping connections with the United States, and the prices realized there are often better than those in the other markets. The auction does a business of around $10,000,000 a year, of which 85 per cent is in apples.

The Southampton auction is the newest of the English auctions and is now a distributing point for southern and southwestern Great Britain which were formerly supplied through either London or Liverpool. This auction is popular because there is no discounting, handling facilities are good, and the auction prices are the prices which are returned to shippers.

Both the Liverpool and Manchester auctions are closed auctions, sales being made only through members. The business at Liverpool runs close to $20,000,000 a year. Manchester is located close to Liverpool in the heart of the manufacturing district, and has direct shipping via the Manchester Canal. The large passenger ships on which a great deal of fruit is carried are discharged at Liverpool, the shipments to Manchester going by way of the canal.

THE London market is considered dangerous to the uninitiated shipper, careful investigation of the integrity and standing of consignees being necessary. There are many firms of good repute on this market, but the number which must be closely watched is larger

(*Turn to page* 31)


No Fertilizer

Fertilizers Crowd Out Undesirable Grasses

¶ An experiment conducted by the Soil and Crop Service of the Potash Syndicate, 1913-1916.

THE improvement of hay and pasture lands is becoming increasingly important. In 1923 demonstrations or experiments in pasture improvement were carried on in 45 states. This work included studies in fertilization, cultivation, and reseeding. Probably the most intensive work of this nature is now done in eastern Ohio, where 709 pasture improvement demonstrations were held.*

It is a well-known fact that under certain conditions top dressing with commercial fertilizers will entirely change the flora of hay and pasture fields.

Working along these lines, we conducted an experiment on an old timothy sod which had been seeded for some years. The clover had entirely run out. The soil was a heavy loam with clay sub-soil, located at West Brookfield, Massachusetts. Fertilizers were applied to two plots for four years. One of them was left without any fertilizer at all. At the end of the four years an equal area from each plot was cut, the grasses were sorted and weighed, and the percentage of each obtained.

Photograph No. 1 shows the grasses found on the plot without any fertilizer. They were chiefly oat grasses and sweet vernal grass, with a little Kentucky blue grass—numbers 4, 5, and 6 in the photograph. There was very little timothy, and no clover.

To the next plot 500 lbs. of an incomplete fertilizer containing 3% ammonia and 8% available phosphate acid was applied. This treatment changed the character of the grasses. The growth of the timothy was increased from 4.33 to 28.2%. Red top was increased from 2.2 to 12.2%. The sweet vernal was very much reduced—from 37 to 7%. The oat grass was about the same in each case.

On the third plot 500 lbs. of the same fertilizer was applied, with potash in addition, thus making a complete fertilizer. The effect of the added potash was to bring in the clover. This is shown in photograph No. 3. Another striking feature was the almost total elimination of the sweet vernal. Only a small quantity was found on the plot where the complete fertilizer was added.

This shows that when fertilizers are used continuously on hay or pasture lands, the value of the hay or pasture is often radically changed.

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**U. S. Dept. of Agriculture, Department Circular* 343, *Washington, D. C., July,* 1925.

ARKANSAS HOLDS A

IT IS A GENERALLY accepted fact that the bankers, business men and dealers in materials that the farmer buys and sells exercise a tremendous influence in determining many farm practices. Especially is this true with a product like commercial fertilizers which are purchased from such dealers or financed by the business men.

The College of Agriculture of the University of Arkansas believes that it is helpful to farmers to give information to these men with whom farmers are in close business contact. This aids them in giving the farmers helpful advice as well as enables them to keep available for farmers the kind of material which will be best for them to use. With this in mind a number of fertilizer schools have been held in Arkansas, the first of such schools having been held at the College of Agriculture at Fayetteville on July 16 and 17, 1924.

ANOTHER school was held at Texarkana in cooperation with the A. & M. College of Texas on December 2 and 3. These schools were very successful, about 150 persons attending each of the schools. Other schools equally as successful, though of only one day in length, were held at Jonesboro, Helena, Pine Bluff, Arkadelphia, and Conway in Arkansas under the direction of the Arkansas Extension Service during the last week in January.

IN announcing the first school to be held at the College of Agriculture, University of Arkansas, Dean Dan T. Gray said: "The Fertilizer School for Business Men and Fertilizer Salesmen is being given by the University of Arkansas in cooperation with business men and business men's organizations of the State, with the view of getting the growing fertilizer business of the State before business men, bankers, and fertilizer salesmen in a safe and comprehensive manner. It is felt that the program will appeal to the business interests of Arkansas. It is hoped that many business men may attend. Farmers and planters are welcome also."

Splendid cooperation in these schools was given by fertilizer manufacturers and dealers as well as by farmers and business men's organizations. A full and com-

¶When business men, scientific workers, and farmers can get together, shake hands and rub shoulders with each other, better agriculture is on the way. The "Bear" State has found one means of establishing this common ground.

FERTILIZER SCHOOL

prehensive program was given covering the subject of fertilizers in a way that was of interest to all who attended the schools.

Among the talks given were: "How Plants Feed and What They Need," "Soil Types of Arkansas," "Selling Service with Fertilizer," "The Application of Commercial Fertilizer," "The County Agent's Place in the Business of a County," "Results of Commercial Fertilizer Work in Alabama," "The Banker's Interest in the Use of Commercial Fertilizer," "Conditions Affecting the Profitable Use of Commercial Fertilizer," and "The Dealer's Place in the Distribution of Commercial Fertilizer."

Reels showing the use of commercial fertilizer and practices in boll weevil control were shown.

These schools have been very popular with farmers as shown by a large attendance of farmers at each school. It is felt that information has been given through these schools which will be invaluable to those who are interested in the use of fertilizers in Arkansas. There is a growing interest in the use of fertilizers and 12,446 more tons of commercial fertilizers were sold from October to April 1923-24 than were sold during the same period in 1922-23, the total sales for 1923-24 being 81,339.55 tons according to the Commissioner of Agriculture who has charge of the fertilizer inspection service of Arkansas.

THE point of saturation in the use of fertilizers on farms in the State is yet a long way off and a much larger quantity of fertilizers can be used to advantage if high grade fertilizers are used and properly applied. These fertilizer schools have been a supplement to the fine work which county agents of Arkansas have been doing in giving information to farmers regarding the proper use of commercial fertilizers. Fertilizers when properly applied are giving profits to the users and these schools and the work of the county agents is not designed so much to stimulate the use of fertilizers as it is to help those who are using them or who are expecting to use them to get information which will enable them to get the greatest possible returns from the money and labor expended in the purchase and application of the fertilizers used.

¶Successful methods used in ridding farms of a well-known weed pest.

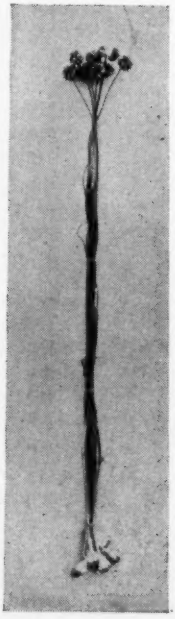
Reducing the High Cost of Garlic

By Albert A. Hansen

Purdue University Agricultural Experiment Station.

FOR many years the largest crop raised on the Turpin farm near Princeton, Indiana, was wild garlic. One field was so badly infested that, to borrow the proprietor's expression, the garlic was as thick as the hair on a dog's back.

DESTROYING wild garlic on that field looked like a pretty hopeless proposition, but despair bred courage and so during November, 1922, the land was plowed in such a manner that the garlic was turned almost upside down, burying the tips so they couldn't grow any more while at the same time exposing the bulbs to frost. The following April the land was again plowed and later planted to corn. This was followed in turn by fall plowing, spring plowing and another cultivated crop, which left the land so free of the garlic that the enthusiastic owner told the story to everybody who would listen.

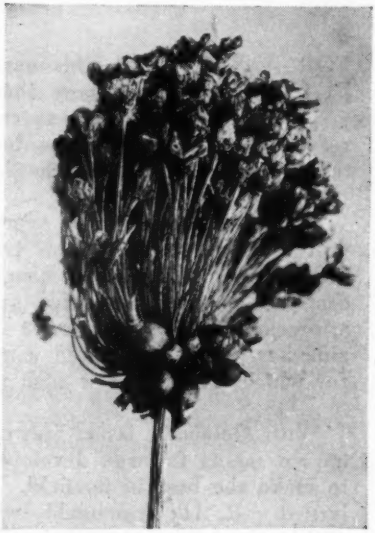


Was it by mere chance that the garlic disappeared? Hardly, because the same method has been successfully used by many other Hoosier farmers. Nolan McClure of Knox County so completely vanquished the garlicly pest by two bouts of fall plowing, spring plowing and summer cultivation that he was afraid to tell his neighbors how it was done for fear that they would laugh at him or that the plan wouldn't work well the second time. Edgar Wood, who manages the farms of the Southeastern Hospital for the Insane

near Madison, Indiana, eradicated a solid patch of garlic in three years by using a similar scheme, although he substituted potatoes for corn during two years of the process. Jake Aleon, the genial president of the Vanderburg, Indiana, Farm Bureau, delivered his land from the clutches of wild garlic by practising three years of fall plowing, but during the spring he plowed twice while cowpeas were used as a summer crop.

WHAT is the secret of success behind this three-year system of cultivation to destroy the wild brethren of the Italian national dish? To unravel the puzzle, let us peer into the habits of wild garlic. A study of the reproductive methods will reveal that garlic reproduces from both ends and that the basal end has a double-barreled system of perpetuation. On the top of the plant are the bulblets, the pesky little "seeds" that are the same size and shape as kernels of wheat, in consequence of which they get into the harvested grain and impart their disagreeable flavor and odor to the flour. On the other end a large bulb is located, but when the covering is removed the chances are that about a half dozen bulbs will be exposed. To make matters worse, one of them is large and soft-coated, while the remainder are smaller, somewhat resembling tiny chestnuts, and each is equipped with a hard winter overcoat that brings it safely through the rigors of the cold season and enables it to sprout the following spring.

Now, here is the secret. The November plowing not only destroys the weak little plants that originate from the aerial bulblets, but it also is death to the larger plants that spring from the soft-jacketed basal bulbs, which must either sprout during the fall or perish of cold. The spring plowing exterminates the shoots from the winter overcoated bulblets, while the summer cultivation almost finishes the job. Three years of work are usually neces-



¶ *Reproduces from both ends*

sary, however, because some of the hard coated bulbs may delay germination for that period. If all of this is combined with the use of garlic-free seed the pest will be no more at the end of the three years. But there is always a catch to take the joy out of life in the best of schemes. This time it is the fencerow plants that will eventually work their way back into the clean field if allowed to grow unmolested. What of them? An oil spray applied three years in succession during the latter part of April will solve this problem. Use a heavy oil, such as waste motor oil, crude oil, or orchard heating oil, and soak the plants so thoroughly with the spray that the heavy oil will gradually work its way into the basal bulbs and destroy them. Do not put the job

(*Turn to page* 35)

The Editor's

FOR A BETTER BETTER CROPS

This magazine has now been published for more than two years. During that time it has covered a wide range of subjects referring to soils and crops, both from the view of the farmer, the research worker, and the "go between"—the extension man.

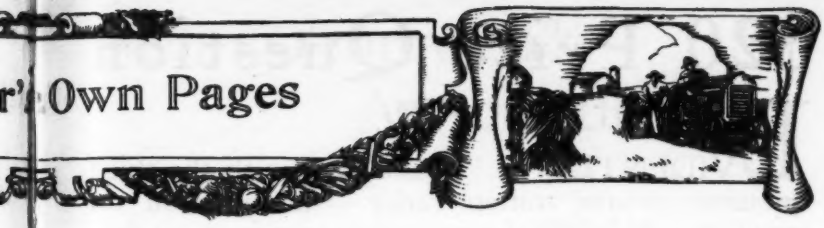
In its editorial policy every liberty has been allowed our writers to express the whole truth as they see it. Articles of a broad human interest have also been included. The readers have come to look regularly for some of our contributors, and we appreciate indeed the interest that has been shown. The magazine has, we think, served a useful purpose in covering a field for which there are few such publications.

With October's issue, BETTER CROPS will come to you with improvements towards developing a publication which we hope to make the best in its field. The editorial staff has been enlarged. R. H. Stinchfield, who has been added, comes to us with a thorough, general farm and scientific agricultural training. On top of this Stinchfield is thoroughly versed and experienced in agriculutral journalism. His chief work will be to maintain a high standard for BETTER CROPS.

Jeff McDermid's articles will continue every month. Jeff has many friends, and we are glad to have his contributions.

In addition we feel that the agricultural business viewpoints should be more prominently included. Capital in large amounts is invested in business that deals solely with the farmer. We are including a section for those interests. The manufacture and sale of fertilizer, for instance, is a basic industry in American agriculture. As land values and population increase, it must become more and more important. We shall keep our readers informed of the developments in this phase of agriculture.

Other improvements are planned, giving news of the latest agricultural research from the United States Department of Agriculture in Washington, a brief review on the more important bulletins published by the state agricultural experiment stations, and the discussion of international agricultural work.



As before, the policy of the magazine will be to discuss such problems on the basis of the whole truth. There is no more dangerous or insidious policy than selecting the truth to support preconceived ideas or for the purpose of making sales. Often, we regret to say, truth is carefully selected.

The policy of BETTER CROPS will be ALL THE TRUTH AND NOT SELECTED TRUTH. This policy is adopted for the simple reason that it is the only sound policy upon which agricultural business or agricultural progress can be founded.

On this basis we are asking the cooperation of agricultural business men, the agricultural research groups, county agents, extension men, and farmers. We want articles that deal with better soils, better crops, and better economic conditions for agriculture as a whole.

The Better Crops Publishing Corporation is now a subsidiary of the Potash Importing Corporation of America. The magazine will be published at 10 Bridge Street, New York City, and its editors hope to continue in increasing the magazine's big family of contributors and friends.

VACATIONS

We do not know whether Secretary Jardine was vacationing on his recent eight weeks' trip through the West. Anyway he came back with the happy, fresh viewpoint with which one generally plunges into his work after a vacation.

"I found farmers greatly encouraged in practically every section of the country I visited," he says. "Over the country as a whole the outlook is for as good or better incomes than last year and the sentiment is one of moderate optimism."

Mr. Jardine sees stronger evidence of the approach of good times for agriculture than he has seen since 1920. Farmers are getting out of the shadow of bankruptcy. Farms are selling once more. Long-standing debts are being liquidated. In short, agriculture appears to be gradually getting its house in order after the post-war disruption, according to him.

$20 Prize Question

EVIDENTLY we "missed fire" with the third question in our contest series—the question on taxation. Not one of you readers saw fit to send us an answer. Upon reconsideration, we do not know as we blame you very much. Taxation opens a big field of discussion. Let's forget it and leave it to the politicians.

Here is our last question. We think it should prove easy to write on and every answer is bound to be interesting to our readers:

WHAT IS THE MOST SUCCESSFUL CO-OPERATIVE EFFORT WHICH YOU HAVE OBSERVED?

Judging will be based on the success of the cooperative effort and the interesting way in which it is described. Do not forget pictures if you can get them. Answers must not exceed 800 words in length and the best answer will receive a prize of $20.

They must be mailed before midnight October 6 and the winning answer will be published in our November issue. The judges will be the editors of BETTER CROPS. In the event of a tie, the full amount of the prize will be awarded to both contestants.

The judges reserve the right to withhold the award in the event that none of the answers is deemed worthy of publication in BETTER CROPS. BETTER CROPS also reserves the right to publish any manuscript submitted in this contest at the regular rate of one cent a word. No manuscripts will be returned.

Send your answer before October 6 to:

R. H. STINCHFIELD
Better Crops Publishing Corporation
10 BRIDGE STREET NEW YORK CITY

Selling Improved Agriculture

¶ This County Agent describes his personal contacts.

By R. F. Fricke

County Agricultural Agent, Erie Co., N. Y.

To my readers, especially the county agents who are interested in the "Better Crops" articles dealing with Farm Bureau and extension work, let me state that in New York State the Farm Bureau is primarily an extension organization and the Farm Bureau Manager is the County Agricultural Agent.

Further that this plan has been used in its present form for two years and is the gradual outgrowth of an attempt to make more intimate contact with the entire membership than I have been able to make under any other system. Incidently let me state that I have been in county agent work, with the exception of a year and a half, since April 1917 and the plan is therefore not the plan of an over-zealous new recruit, but of one who is growing old and weary in the work.

Inasmuch as the Farm Bureau is the Extension Organization, we do this individual work only with Farm Bureau members. Farmers who are not members do not receive this personal service. Our membership dues are $5.00 per year and our membership the last two years has been slightly over 900 members. An assistant is employed.

In this county, before we began the personal service work, only 30 per cent of our previous year's membership renewed their membership. Now over 60 per cent of our previous year's membership renew. Apparently the members approve of the plan.

In the fall previous to the membership campaign, a service sheet is sent to each member. This service sheet is the basis of our personal service plan. It is changed somewhat from year to year. The service sheet used last year is reproduced here (or reproduced in part). As these come in, a list of men checking each question is made according to the question. For example: Each farm checking No. 1A—I desire information on determining the cost of plant food in fertilizers, is put on a sheet headed No. 1A. Then early in the spring, about the

HOW TO GET SERVICE

time that men are thinking of buying their fertilizer, a letter is sent out giving them information on the advantage of buying high analysis fertilizers and the actual saving that they can make based on current fertilizer prices for low analysis goods compared with a high analysis goods that contains the same proportion of the different plant food elements. And so on with the other 59 questions on the service sheet, each one being sent out when timely. We attempt to boil down this information on an eight by ten sheet of paper as farmers often will not take the time to read bulletins and lengthy papers.

THE next thing that is done is to place these records in a field book. A loose leaf Lefax book is made in triplicate, one for the agent, one for the assistant and one for the office. In the front of the book is a key to the service sheet. The book is indexed with tabs by communities arranged alphabetically, and every member is listed by school districts in his respective community. Below his name are listed the numbers he checked on his service sheet. Some of the questions call for personal visits while others are taken care of entirely by mail. Those asking for poultry culling, lime tests, alfalfa and potato seed plot, drainage, and raspberry mosaic are called on personally. Last year 385 men asked to have soil tested for lime and 1800 soil samples were tested. Two hundred and fifty men asked for poultry culling and over 30,000 hens were culled, we insisting that the farmer himself cull a part of the flock under our supervision.

Of course, all of the men do not fill out their service sheets. We ask the committeemen to follow up delinquents and we follow up the service sheet with letters on particular projects. For instance, in the spring we send a letter to all of our members enclosing a return card, telling them that we are ready to make soil tests for lime and asking them to fill in the date by which they want the test if they have already applied for it on the service sheet, or to indicate on the card that they want a lime test if they have not already applied. Similar cards are sent out on other projects.

Our aim is to see every member at least once during the year. Those who do not fill out a service sheet or a card we call on when we are nearby, explaining the service sheet to them and usually rendering timely service at the same time. Those who have filled out a service sheet and who have not asked for any service requiring a personal visit, we check up with regarding the information asked for and sent by mail, trying to make it clearer and finding out what use has been made of the information. Last year 90 per cent of the membership asked for service and received it.

WITH two men working in the field the question of a record of the work done is of course important to prevent duplication. An office conference is held every Monday morning, and a weekly schedule of the communities to be covered is worked out. A record is made of each farm visit on a separate slip for each man which is later filed. Before they are filed and once or twice a month each Lefax field record book is checked up from the slips of both men and the requests taken care of checked off recorded by placing a C under the number of the service. In that way we know just what service each man has received and what he is still to

(*Turn to page* 43)

HEAVY buying of fish scrap, blood, tankage, and hoof and bone meals, attributed to manufacturers of stock and other feeds, has resulted in numerous advances in fertilizer materials quotations during the past month and the present market situation indicates that as a result of this condition, fertilizer manufacturers will have to pay higher prices for many of their raw materials this season than was the case last year.

UP to the present time, most of the fertilizer mixers have remained out of the materials market to a great extent, doubtless in the belief that lower market values might reasonably be looked for as soon as the feedstuffs manufacturers have covered on their season's needs. To date, however, this belief has not been justified by the market movement, although a little evidence of weakening values has been seen on a few items.

From present indications, it appears that the fertilizer industry generally has emerged from its long period of depression, and that loose credits, price cutting, and the other evils which have demoralized the business, practically since the post-war deflation period, are a thing of the past.

One of the largest manufacturers of fertilizer has just emerged from a 17 months' receivership as a full-fledged fertilizer company, having abandoned its cotton oil and foreign potash interests to give its undivided attention to the manufacture of fertilizer.

The general sentiment of the business world regarding conditions in the fertilizer industry was recently summed up by the Wall Street Journal, the country's leading financial newspaper, which said, "The fertilizer business, fortunately, has turned the corner and bids fair to offer some encouragement to all hands interested in the industry."

Although nothing official has yet been forthcoming from the fertilizer manufacturers regarding prices and terms for the new season, it is believed that this season will witness a repetition of last year in the matter of short terms extended to consumers of fertilizer. One of the glaring evils of the industry during its long period of depression was the looseness of credits and the difficulty which the companies experienced in making collections. The present policy of the leading producers, that of selling for cash or on short terms, is better not only for the companies themselves, but what is more important, is beneficial to the great majority of consumers as well. Under former conditions, the overhead of the manufacturers was necessarily much greater than normal, and this was no doubt reflected in the prices for mixtures in many instances. Under such circumstances, it is conceivable

that the farmer who paid his bills promptly was in some measure, at least, helping to pay the way for the backward customers of the fertilizer makers. Under the new policy of the manufacturers, overhead is held down and the farmer and distributor who is "good" for the payment of his fertilizer bill within a reasonable period is not beng forced to help shoulder the burden created by the slow payers.

Consumption of mixed fertilizers showed a marked gain during the past year, particularly in the cotton states, and it is generally expected in the industry that further expansion will be seen this year. Efforts of the manufacturers to increase the use of high test fertilizers have met with great success, and an increase in the consumption of the high test plant foods is in sight for the new season.

Early sales of potash in American markets this year are of record-breaking proportions, and heavy imports are scheduled for the next few months.

Efforts to have the Chilean Government reduce the export duty on nitrate of soda have proved unavailing thus far, and the increase in sterling exchange rates has put the market on a higher basis than was the case last year.

Domestic sulphate of ammonia has sold in a large way on contracts for the new season, and the market has advanced since the naming of contract prices several weeks ago.

German synthetic sulphate of ammonia, which was placed on the American market in a large way last year, has been rather quiet for the new season thus far, owing to the difference in price between the German and the domestic sulphate, favoring the latter.

PRICE TREND IN FERTILIZER MATERIALS

THE FOLLOWING PRICES ARE THE AVERAGE PRICES PER 100 POUNDS FOR FIVE SELECTED* POTASHES, AMMONIATES, AND PHOSPHATES. THE COMPARISONS ARE MADE AGAINST JANUARY 1, 1914, AS REPRESENTING PRE-WAR MARKET VALUES:

Material	Current	Month ago	Six months ago	Year ago	Pre-war Jan. 1, 1914
Potashes.....	$1.30	$1.30	$1.29	$1.13	$1.35
Ammoniates.....	2.58	2.49	2.61	2.50	2.14
Phosphates.....	.6180	.6160	.60	.5950	.57

* The five selections under each heading are:

POTASHES	AMMONIATES	PHOSPHATES
Kainit, bulk	Sulphate of ammonia	Acid phosphate, 16 per cent
Manure salts, bulk	Blood, dried, New York	Bones, rough, hard, Chicago
Muriate, bulk	Fish scrap, dried, works	Bones, ground steamer, Chicago
Sulphate, bulk	Soda nitrate, spot	Rock, Florida, 68 p.c. works
Magnesia, bags	Tankage ground, New York	Rock, Tennessee, 75 p.c. works

Why Upset The Export Apple Cart?

(*From page* 17)

than at other markets. The auctions are located in Covent Garden and Pudding Lane in the heart of the business section. Great confusion attends the sales, but the prices are about the same as in the other markets.

Germany, before the war, took as many as 500,000 barrels of Canadian and American apples each year, and in some seasons 200,000 boxes of apples from Washington and California, the Hamburg auction being a distributing point for Germany, Scandinavia, and Russia. Now, however, the Scandinavian countries receive most of their shipments direct, Russia is out of the market, and Hamburg must depend largely on the German demand.

Another change is that whereas the demand was formerly for barreled apples, boxed apples are now preferred. This has been due to the imposition of high freight rates and import taxes which enable European growers to meet the demand for inexpensive fruit. The same situation prevails at Bremen, and at Rotterdam which furnishes supplies to the Netherlands and the Rhineland. Germany also has quarantine regulations against diseased or infected fruit, and these conditions can be detected easier in boxed rather than in barreled apples.

The demand in Germany is for red apples such as Jonathans, Spitzenbergs and Winesaps during the Christmas season, and after the middle of January Yellow Newtowns are wanted. The Rome Beauty and Arkansas Black in good condition and bright color are favored. Preferred sizes range from 150s to 200s, a small quantity of sizes up to 125s, but larger apples are discounted.

Shipments to both Rotterdam and Hamburg by way of the Panama Canal have been in great favor the past two years, because the fruit arrives in good condition and reships well to interior points. The fruit is fresh and firm, and the packages practically free from breakage. The apples bring higher prices than shipments from London and New York on account of their superior condition.

THE Scandinavian countries including Sweden, Norway and Denmark, have shown a steadily increasing demand for American apples in recent years. Direct exports of boxed and barreled apples from the United States to these markets during the year ended June 30, 1924 totaled 294,000 barrels. The auctions at Hull on the East Coast of England, also does a considerable apple business with the Scandinavian countries.

Sweden is the leading Scandinavian consumer of American apples, the demand being for barreled apples rather than boxed fruit. Competition comes mainly from domestic apples which appear on the markets from late summer to early winter, but by January 1 these are mostly out of the way. Preference, however, is given the American apples, the smaller sizes being in demand, such as 2¼ inch to 2½ inch barreled stock, and not larger than 163s in boxes.

Apples for both Norway and Sweden are bought on order, most of the fruit being sold to importers on an f. o. b. New York basis, cash against documents, Gothenburg. The shippers are represented by local brokers or agents who canvass the buying trade. Purchases are made direct by all three countries because there is

damage from breakage and theft in reshipments from Great Britain.

Norway wants barreled varieties such as York Imperial, Ben Davis, and Baldwin. The boxed varieties preferred are Jonathan, Spitzenberg, Winesap, and some Yellow Newtowns. There are more Tyrolian apples in the Stockholm shops in mid-winter than Canadian and American apples combined. Supplies from southern Europe during the autumn are augmented by domestic fruit, and by supplies from the Netherlands and Denmark.

Danish apples early in the season in Denmark restrict the demand for American shipments. The demand is for York Imperials, Jonathans and Spitzenbergs prior to the New Year, after which the demand is for Winesaps and Newtowns. The sizes of Newtowns preferred are 138s to 175s, and of red apples from 150s to 200s. Pacific Coast ships have recently started to call at Copenhagen, which is expected to reduce freight costs on boxed apples.

Note: Detailed reports on foreign apple markets may be obtained upon request to the Bureau of Agricultural Economics, Department of Agriculture, Washington, D. C.

Crawford Directs Agricultural Information

(*From page* 10)

Iowa and his M.A. from the University of Kansas. From 1910-1914 he was instructor at the Kansas State Agricultural College and since 1924 was head of the Department of Journalism there. During short periods of leave from the College he has done a variety of editorial and writing work in many places. While at the Kansas Agricultural College he was managing editor of the Kansas Industrialist, an outstanding college publication. In an article published in this paper on the occasion of Mr. Crawford's appointment by Secretary Jardine, the following is said about his work:

"Professor Crawford is nationally known as a teacher of and an authority on journalism. His Book, 'Ethics of Journalism,' published last year, has been praised in various quarters as a sound exposition of the code of the newspaper worker and publisher. He is the author of 'The Carrying of the Ghost,' a book of verse, and has contributed poems and criticism to the New Republic, The Dial, Poetry, The Midland, and other magazines and newspapers. He is associate editor of The Midland and has edited several anthologies and other books. From 1922 to 1924 he was president of the Kansas Authors' club and now is its critic. He has written much agricultural copy for magazines, farm journals, and newspapers. He established here the first series of bulletins on agricultural journalism published by any educational institution.

"He also has served as president of the American Association of Agricultural College Editors and now is president of the American Association of Teachers of Journalism."

A Pertinent Question ?

Say, Jeff:—

Did your stenographer dope out that article on "Laziness" last January and are you out at Coney Island on a merry-go-round to avoid the effort of fanning yourself? 'Fess up.

But if you are really on the job I want to commend you for devoting hot July down in stuffy New York to this editorial which is sure going to keep me on the job the rest of August and by the hot spell. Now that was really a great effort on your part to have accomplished such a result. For the last 15 years I have watched the rest go and had at last arrived at the effete stage myself, due of course to environment, where a vacation hove in sight. Now you've spoiled it all. I'll stick, but how my ideals would tumble should I learn that you are down at Coney Island on a merry-go-round cooling off, too tired to do it by hand.

"Better Crops" is getting better'n ever. I am glad that it sizzled through August. Make it hot this winter.

Yours very truly,

E. L. Luther,

The University of Wisconsin
Dept. of Farmer's Institutes.

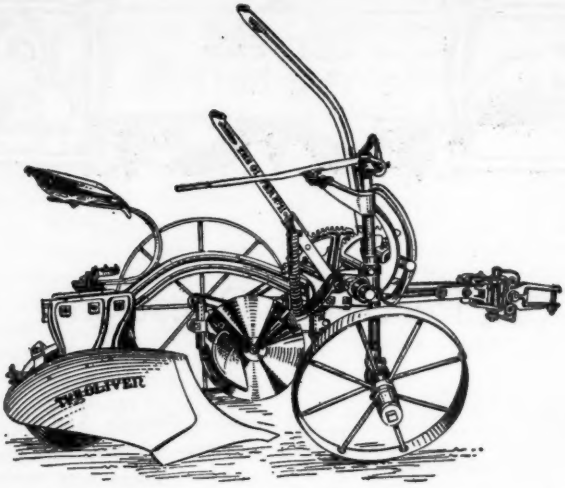
So as to keep up Mr. Luther's morale, I wish to state right here that "Lazziness" was written just two days before the magazine went to press, but the real sweating was done by your managing editor in running around after Jeff to get the story finished.— By the way, Jeff hasn't been the same since.

A Correction

We are very pleased to acknowledge the following correction as called to our attention by Mr. P. A. Young, County Agent of Gallipolis, Ohio.

Dear Jeff:

In July Better Crops Edition I note in my article on drainage of Mr. Robinson's Farm on Page 43. "The tile had been laid too shallow only 4 to 6 ft. from the surface." This should read 4 to 6 inches from the surface.



A POPULAR FAVORITE
on Tens of Thousands of Farms

Clean cut, even depth furrows with all weeds and trash completely buried in the bottom of the furrow are indications of the right kind of plowing. It is the type of plowing which thousands of owners have come to expect from the James Oliver No. 11 sulky.

As the most popular sulky plow ever built, it has been widely imitated, but is still without an equal in simplicity, in lightness of draft, in ease of operation, and above all, in quality work.

Three features—the extra short wheel base, the rolling landslide and pivoting front furrow wheel make possible short turns without lifting the bottom. Every owner appreciates this additional advantage.

OLIVER CHILLED PLOW WORKS

Plow Makers for the World

SOUTH BEND **INDIANA**

Dress Them Up

¶An investment in good appearance to increase high interest.

NEBRASKA will dress up its youngsters to provide one of the features of this year's state fair at Lincoln, September 6-11. Boys and girls who exhibit baby beeves and other calves in club classes will appear in white furnished by the fair officials. The boys are to have white overalls and jumpers and the girls white knicker suits.

The showing of baby beeves has been a growing attraction of the Nebraska state fairs of recent years, according to L. I. Frisbie, state extension agent in club work. The white suits, adding to the youthful wholesomeness of the young exhibitors is expected to make the club show eclipse every other feature of this year's livestock area. More than 150 boys and girls—between the ages of 10 and 18 will exhibit the pets which they have been fattening so carefully.

Arrangements have been made for the exhibitors to wear their suits while showing in competition, at the public auction, at the livestock parade before the grandstand, and at the showman's contest. The livestock parade is a traditional feature of the program before the grandstand, and the white suits on the youngsters will draw more than ever to club work the interested attention of several thousand spectators.

Reducing the High Cost of Garlic

(From page 23)

off, however, because after mid-May the below-ground bulbs separate and cannot then be reached by the deadly oil. This was the scheme used with complete success by B. F. Nesbit, a good Knox County, Indiana, farmer in cleaning out a number of patches of garlic scattered over a ten-acre field of rich soil.

The taming of wild garlic will mean millions of dollars annually in the pockets of American farmers. This weed decreases yields, taints the odor and flavor of flour, creamery products, eggs and meat, entails heavy milling losses by contaminating the machinery, causes serious firing injury in stored grain and is one of our foremost lawn weeds. In nine southern Indiana counties a survey conducted by the Agricultural Extension Department of Purdue University revealed that wild garlic infests nearly a half million acres of cultivated land, entailing an estimated annual loss of over $2,000,000 and similar conditions exist throughout a large portion of the winter wheat area of the United States. The amount of garlicky wheat received in St. Louis has increased from less than four per cent to over 20 per cent during recent years.

Fortunately, when the three-year cultivation method is faithfully practised, the wild garlic ceases to be wild.

Premiums for Protein

(*From page 6*)

and starchy. Experts are accordingly able to judge of the protein strength of wheat from the hardness and vitreosity of the kernels.

IT is true that this is merely an external measure of quality which indicates only very roughly the internal nature of the wheat berry. Yet it is not to be despised. Proof that the hardness and vitreosity of wheat kernels is in a general way a true index of their protein content or strength is given by the fact that wheat falling into the subclass "Dark Northern Spring" brings several cents a bushel more than wheat falling into the subclass "Northern Spring." Quality and protein content therefore do play an important part in determining the price paid for wheat at country stations. The Federal wheat grades do effectively separate wheat into grades roughly corresponding with their milling value. What the farmer demands of course is a more exact measure of the protein content of his wheat. It is in the interest not only of the farmer but of the country that this demand should be satisfied as far as possible. When a producer is without assurance that a superior product will command a superior price, he has no incentive to try for quality production. This is as true of wheat as of eggs or fruit or vegetables, or any other commodity in which differences of quality are an important market factor. The Department of Agriculture is doing what it can to find a solution for the problem, and there is no reason to despair of finding one. Perhaps in this matter, as in so many other problems of marketing, the remedy will be found by the farmers themselves.

THE RIGHT MAN IN THE RIGHT JOB

The Soil Improvement Committee of the National Fertilizer Association has elected H. R. Smalley director of its work in the northern states.

Mr. Smalley, a native of Indiana and a graduate of Purdue University, has been actively engaged in soils and crops work for nearly 15 years. He has a wealth of experience to lend to the cooperation of the Soil Improvement Committee with agricultural colleges, experiment stations, the United States Department of Agriculture, county agents and agricultural agencies throughout the country.

The purpose of his work will be to promote a more intelligent use of commercial fertilizers, better systems of soil management, and hence a more profitable agriculture.

We wish Mr. Smalley success with his work and compliment the Soil Improvement Committee in their choice of the man for this important position.

¶ Puts into practice what he preached.

County Agent Becomes Corn Breeder

By H. E. McCartney

County Agent, Shelby County, Iowa

A. WILSON, of (Harlan) Shelby County, Iowa, has made an enviable record as a breeder of high yielding corn. He has accomplished this in the four years that have intervened since he retired from the position of County Agent in the County where he is now farming.

IT was at the close of the season of 1923 that the public became aware of the success that Mr. Wilson had attained. It happened that in Shelby County five corn yield contests had been conducted that year. Wilson had led in securing the highest yield which was 116⅔ bushels per acre. The average yield of his corn was 86.4 bushels on the five plots and was many bushels per acre above the average yield of all other varieties. His yield was the highest in the State of Iowa as shown by the reports from the local corn contests as held in nearly one-half the counties of the State.

When the yields were published, Wilson's fame was broadcast. How had he produced corn that would yield so heavily? To this question Wilson explained the method he had followed. He said, "When I went to the farm in 1921, I had 60 ears of seed corn which I had selected rather carefully and which appeared to be good. These ears were of several different types and I had selected

them with a view of finding the highest yielding type as well as finding the highest yielding ears. I shelled two rows from each ear and planted the kernels from those two rows retaining the balance of the ear for future use. The two rows of kernels were planted in single rows of 25 hills each and the crop from each row was husked and weighed separately. The resulting yields varied from 53 bushels per acre to 113 bushels.

"Fifteen ears that yielded at the rate of 96 bushels per acre or more were retained and the other 45 were discarded. I planted the seed from those 15 high yielding ears on a plot containing about two-thirds of an acre, keeping the three highest yielding ears separate and planting them in my garden. At pollinating time I cross fertilized by hand the hills planted from the three highest yielding ears.

THE seed I furnished for the five corn yield contests in Shelby County in 1923 was produced as follows: 20% from the three rows from my highest yielding ears and 80% from the other 12, all of which had yielded at the rate of above 96 bushels per acre." Wilson had furnished corn with a definite yield record back of it and deserved to win.

In 1923 on his own farm, he followed the same general plan of selection and cross fertilization and was able to gather several bushels of seed from his high yielding strain. Calls for seed came from far and wide, but he had none for sale. Many who were disappointed in this, immediately booked orders for seed from the 1924 crop.

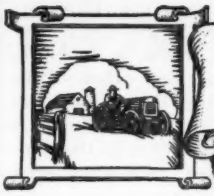
In 1924, he again stood highest in the local yield competition. His average in the five contests in Shelby County was 9½ bushels above the average of all others. Again his yield was the highest reported from any entry in any county contest in the state. His corn was entered in a yield contest conducted for farmers in four counties. In this he led the field of 39 entries with a yield that was 10 bushels above the average of the other 38.

During the season of 1924 his whole corn crop had been planted to seed from his high yielding strain. This made it possible for him to gather 400 bushels of seed. The farm upon which he was located did not have a seed house. But, practical man that Wilson is, he cleared out the old central hog house and literally filled it with seed corn, hanging it on twine strings from the ceiling.

His fame has spread so that his seed corn is sold to many of the best farmers in his own county and state and quite a number of men outside of the state.

WILSON is well equipped educationally for his corn breeding. He is a graduate of a medical college. He has the degrees B.S. and M.S., both in Agriculture. He has done work in genetics toward securing a Ph. D. He is wonderfully versed in all the scientific technique surrounding the work in which he is now making so pronounced a success.

When he started farming at the time when prices were at the worst there were many who predicted that Wilson would eventually regret the venture. Now those same men see in him one of the outstanding successes of the farming game. They expect much of him and hope that he will turn his attention to developing a variety well adapted to climatic conditions and one which contains the greatest possible feeding value as well as one showing outstanding yield.



AGRICULTURAL DEVELOPMENTS

By P. M. Farmer

New Facts on Pear Blight

Pear blight, a disease caused by a specific bacillus, ordinarily does not attack the mature fruits of summer apples and pears. It can occasionally attack summer apples clear up to maturity, according to M. B. Waite of the Bureau of Plant Industry, U. S. Department of Agriculture, and he says that probably the same thing is true of summer pears. This disease has never been found on mature winter apples and pears at harvest time in the autumn or in storage during the winter. Under ordinary inoculation conditions the disease will not attack these fruits. It has been proved, however, that under forced conditions the pear blight germ can attack the tissues of a mature winter apple.

Triumph in Apple Shipment

Speaking of diseases attacking fruits is a reminder of the great progress that has been made through the medium of refrigeration in overcoming deterioration caused by bacteria and fungi. Recently a triumph was scored in the scientific handling, storing and transporting of apples when a carload of 1924 Winesaps from the Pacific Northwest were sold in Glasgow, Scotland on July 28. This shipment arrived on the market after the 1925 apple crop from Australia and New Zealand was practically out of the way. The prices for these Winesaps were higher than the average received for fresh crop apples and were nearly four times as much as the price paid for 1924 Portuguese apples sold at the same time.

These Winesaps were grown on a ranch at Yakima, Washington. They reached their final destination, nearly a year after their harvest, in excellent condition largely because of scientific handling from picking time to arrival at Glasgow, nearly 8,000 miles away. The way these apples were handled should prove a good lesson in scientific marketing. They were first wrapped in oiled paper, placed immediately in cold storage at 30 to 32 degrees and held there until time of shipment. When they were moved out of storage they were laid in a fully iced refrigerator car in which the best refrigeration possible was obtained by applying salt to the ice. At New York the fruit was transferred to refrigeration chambers on the steamship. The apples were held in the original storage plant until the middle of the summer and shipped across country during the hottest season.

According to Edwin Smith, specialist in foreign marketing for the U. S. Department of Agriculture, efforts devoted to improving handling, storage and transportation of apples is the one best means to hold and extend foreign markets against aggressive competition from all parts of the world.

Crop Meter in New Use

The crop meter which has been used for some time to assist in making estimates of acreages by crop estimators using automobiles has now been adapted for use in

railway trains. The meter is hooked up with one of the wheels of a passenger car so that the estimator riding on the train can make a record of the lenghts of fields devoted to different crops alongside the right of way. When the train comes to the edge of a cotton field the operator pushes the cotton button and the machine records until shut off by the pushing of another button when the end of the field is reached. If the next field is corn the corn button is pushed, and so on. The machine was tried out satisfactorily recently on a Southern railroad, the operator taking a trip of about 200 miles recording the crop acreages on either side of the track. These records give an excellent means of estimating the changes in acreage that go on from year to year.

Water Kills Sugar Cane Moth Borer

A successful and simple means of fighting the destructive sugar cane borer has recently been worked out by T. E. Holloway of the Bureau of Entomology, U. S. D. A. The sugar cane "seed" consists of pieces of stalks and if the plants have been infested by the borer a new crop runs the risk of great damage from the insect. Previously it has been difficult to combat the insects which were imbedded in the stalks. It has been found, however, that simply immersing the "seed" stalks in water of ordinary temperature for 72 hours does away with the pest. General adoption of this simple remedy in the sugar cane section woul obviate heavy losses.

More Ammunition to Fight TB.

The rising tide of battle against animal tuberculosis is one of the conspicuous developments in the livestock industry. That the country as a whole is convinced of the economic and other advantages of getting rid of this arch enemy of the livestock industry is shown by the increase in the number of modified accredited areas and in the appropriations being made for eradication. There are now 89 counties in the United States which are known as modified accredited areas, that is, areas having less than one-half of one per cent of the disease. At the beginning of the year there were only 53 such counties. Appropriations made in the various States for the present fiscal year, together with the Federal funds, amount to approximately $13,175,000. This is double the amount available for the year ended June 30, 1925. In addition there have been many amendments to State laws making their operation more effective. Illinois has passed a new law which provides for the testing of all herds in counties wherein at least 75 per cent of the herds of breeding and dairy cattle have been voluntarily tuberculin tested as provided by law. In other words, Illinois is not going to let the progressive farmers who have made an honest effort to get rid of TB suffer because of backwardness in neighbors who have not felt the urge to have their cattle tested. This State also repealed the famous "Shurtleff Law," enacted in 1911, which prohibited cities and towns in the State from enacting ordinances requiring the tuberculin test of cattle furnishing dairy products for consumption within their municipalities.

Better Sires Gain

The campaign for better sires and better stock, being fostered by the Bureau of Animal Industry with the assistance of agricultural colleges and county agents, continues to have a strong and steady

(*Turn to page* 44)

A New Day for Poultry in Dixie

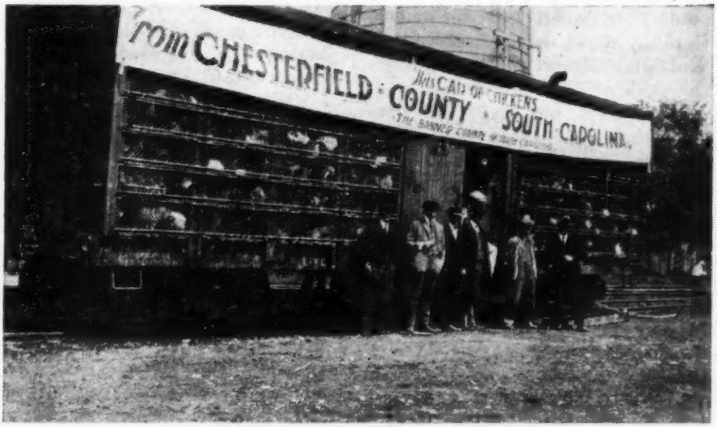
By J. Lewis Merritt

IN the "Cow, Hog, and Hen" program the "Ole Hen" is certainly holding her own along with the other two members of this famous trio. Every day we have brought to our attention outstanding examples of what can be done with a small flock—where a little time and effort are expended in the proper way.

Many of our farm folks think that we must all be poultry experts in order to succeed in the poultry business. However, such is not the case, because if information and personal help is necessary, it can be had only for the asking. The farm demonstration agent and home demonstration agent as well as the specialist of the extension service always stand ready to help the man or woman that is interested in raising poultry.

It used to be that chickens were not much of a factor on the farm. In other words most every farmer had a few chickens, and as long as they furnished enough eggs for the family use and enough fryers to go around when the preacher made a visit, it was all right. In those days—and it wasn't many years ago—the farm flock was only a family affair, furnishing the family table. Only occasionally a few chickens were disposed of on the local market, when the farmer went to town on Saturday.

IN some sections of the South it was a common thing for the traveling pedler to go around through the country and trade general merchandise for the farmer's surplus chickens. It was good business for the traveling pedler —because he sold his merchandise and at the same time gathered enough chickens together on his rounds to get a premium either



¶ Dixie's surplus on the way to market.

on the local market or a more distant market. At that time the farmers did not know the true value of the farm flock, but even under those conditions the flock seldom showed a loss. On an average they just about broke even.

HOWEVER, the last few years have brought about a magic change in the poultry industry of Dixie. The change has come in all departments of poultry raising. We now find on the farms in the South better equipment, better ranges, better feeding methods, better stock, better care and management and vastly improved marketing methods. As someone has said, "the chicken money is no longer 'pocket change' among Southern farmers; it's big business."

The following report of the poultry work done by the Extension Poultry Specialist of South Carolina, is typical of other Southern states and will show just what progress is being made in poultry raising in the Southland. It will show that the interest in poultry is growing by leaps and bounds. And instead of selling poultry in small lots as it was formerly done, we now sell in carload lots. The report summarizes the work of 1924 as follows:

Poultry is one type of livestock that seems to be coming into its own in South Carolina. The census of 1910 shows that the average farm flock of poultry in the state consisted of 16 head of all kinds of poultry; in 1920 the average was 22 head. There was little encouragement to farmers to increase the number beyond home needs on account of the lack of a dependable market. However, the nine carloads of live poultry shipped out of the state through extension efforts in 1923, followed by the 24 carloads in 1924, served to convince the people that there is an outlet, and there has been a corresponding increase in the size of the average farm flocks. Probably it would be an economic arrangement if the majority of farmers would eventually carry from 50 to 100 birds per farm as a feature of a diversified system.

During 1924 demonstrations and other work were conducted as follows:

Number of demonstrations in culling, caponizing, poultry house constructions	1,223
Number of flock demonstrations started or under way	960
Number of flock demonstrations completed or carried through the year	838
Number birds involved in these complete demonstrations	55,506
Number community poultry associations organized	8
Number county poultry associations organized	5

AN outstanding example of what can be done with a small farm flock in Dixie, is demonstrated by V. M. Faircloth of Andrews, S. C., which shows that a neat profit can be made where a little time and effort are put into the business.

Aside from his work as a rural mail carrier, Mr. Faircloth finds poultry a most interesting and profitable business, according to Miss Juanita Neeley, Winthrop College Poultry Specialist. In 1924, he bought about 500 baby chicks from which he kept 100 selected layers during the winter of 1924 and 1925.

Advantages were taken of the opportunities offered him in securing the services and aid of the home demonstration and poultry

department of Winthrop College. The agent and specialist visited Mr. Faircloth's home several times in order to help select his breeding stock, lay off the yards, and advise about the building of the houses. He always asked advice as to feeding, brooding, and selecting eggs for he said, "I know absolutely nothing about chickens, but I am going to learn everything I can and expect to do exactly what I am told by those who know more than I do. Experience, I know, is the greatest teacher but also the dearest, and I do not believe in going through everything in an experimental way if others can save you the time, trouble and expense." He believes that growing into the work is the only way to succeed.

Mr. Faircloth is a member of the Georgetown Poultry Association and is doing a great deal towards boosting the poultry industry of Georgetown County and South Carolina. He is interested in the junior poultry clubs and gives special reduced prices to the members for eggs and breeding stock, in addition to offering some splendid prizes for exhibits at fairs.

One visiting this little poultry farm will find a most inviting appearance around the place and a most hospitable host and hostess. The poultry yards and houses are kept in very sanitary condition and the birds will impress you with the idea that they are enjoying good management, comfortable houses, and well-balanced rations.

Selling Improved Agriculture

(*From page 28*)

receive. The service on the questions handled by correspondence is not checked individually but by the service number. In this way we make a personal contact with every member.

It is natural under any other system to call on a relatively few progressive men who ask you to call and with whom you become personally acquainted. Under this system you call on every member and you get a larger number of men to actually put into practice the things you are trying to teach, and you make them realize that you can be of real service to them and willing to give them that service. After all personal contact is the most effective agent and if you know and believe in your work you can sell your improved practices and methods to the farmer in no other way as effectively as by personal contact.

In my enthusiasm I don't want to forget the committeemen who do valiant work without pay and with often too little recognition. We advise with the committeemen in our work, who tell us how to approach our men. They get the other fellow interested in receiving service and are invaluable in the carrying on of an extension program, and can be used in this program as well as in any other program for carrying on extension work.

Agricultural Developments

(*From page 40*)

growth. The campaign is now in its sixth year and the report for the 23rd quarter, which ended June 30th, shows that 15,818 livestock raisers throughout the United States have signed the pledge to use nothing but purebred sires for any kind of stock kept on their farms. These farmers own approximately 550,000 four-footed animals and more than 1,185,000 head of poultry. The campaign to date has supporters in 46 States and there are now 41 counties having more than 100 each of men who have made this pledge for livestock improvement.

Kentucky, with 3,235 persons enrolled is the leader in number of participants, followed by Ohio with 2,971, Virginia with 2,419, Nebraska with 1,522 and Vermont with 1,461. Ohio is the leader in number of animals listed, having 103,321 animals and 296,229 head of poultry.

During the last quarter from April 1 to June 30, 335 new persons enrolled from 16 counties in five states. Outstanding work was carried on in four counties—Grayson, Va., which enrolled 95 new members; New Haven, Conn., which contributed 78; and Shelby and Union Counties, Ky., with 48 and 39 enrollments. In the previous quarter Mr. Wayland Rhodes and his co-workers in Kentucky won the State Championship and the most recent report shows more progress. This State, however, has not yet been able to wrest the county championship from Pulaski County, Va., where E. G. Grigsby, county agent has held the lead ever since this country-wide campaign started. The work in Union County, Ky., under County Agent R. O. Wilson shows that these Kentuckyians are hot on the trail of the championship. With an enrollment of 496 this county is now less than 100 behind Pulaski with 592. Agents Charles W. Wampler of Rockingham County, Va., and Ford S. Prince of Greene County, Ohio, are close together in third and fourth race. Rockingham has 384 and Greene 359.

It is interesting to note that in Pulaski County, Va., 70 per cent of the farms reporting livestock are listed as using nothing but purebred sires. There are, of course, a large number of persons not farmers owning some livestock in this county and if they were included the percentage would be much less. In Union County, Ky., the percentage of farms enrolled is but 32 which gives this county great opportunity for gains in the future.

Youngsters Raise Good Cotton

By Canon C. Hearne

State Extension Agent, University of Missouri

IN that portion of Missouri that has received the trade-mark "Where North Meets South" is Pemiscot County where the North represented by town interests has met the South, represented by cotton farmers. These two interests have met on the common ground of Boys' and Girls' Club work, led by County Agent, M. D. Amburgey. He broached his club ideas to R. H. French, Manager of several cotton gins in this county, who agreed to put up $450 in prizes, Amburgey to supervise and furnish the rules.

The county was divided into four groups with $50 prizes for each group, divided into five places. This was so each club member would compete against other members with similar types of soil. The factors used to determine the awarding of this first set of prizes were agricultural practice, records kept, earliest bales, grade, yield, and economical production.

Each member was to plant two acres of ground planted with seed furnished by Mr. French of the E. St. Louis Cotton Oil Company, do all the work attached to preparing the land, planting, cultivating and harvesting, and keep records on the same. To the club making the highest number of points as a whole the grand prize of $50 was offered.

The club members getting in the earliest bale weighing not less than 400 pounds a first prize of $30 and a second of $20 were to be awarded. Best yield of seed cotton and best lint percentage were cared for with a first prize of $30 and a second of $20.

Best bales in point of grade and staple received a $30 and $20 for first and second respectively.

Best agricultural practice was equally well represented.

EVERY club member who faithfully and fully complied with the terms of his contract was to have the ginning charges paid on one bale of cotton.

Eighty-eight members between the ages of 10 and 18 years entered the 1923 clubs and of this number 34 finished the work in spite of 193 being the most unfavorable cotton season in years.

January 10, 1924 was set for the Achievement Day though many members still had some cotton in the field. The Caruthersville

Chamber of Commerce, where the meeting was to be held made arrangements for a noon banquet for the club members and their families and in the afternoon, in addition to the awarding of the prizes, a free moving picture of club activities was to be shown. Despite heavy rains on this date 19 of the 34 members were present.

While the town of Caruthersville seemed to be entirely behind French and Amburgey in this cotton club move, I asked J. J. Long, Cashier of the First National Bank what he thought about the cotton club idea of promoting a better type of cotton farming, Mr. Long replied, "Amburgey has paid for himself with this one piece of work. If each one of these club members is not a better citizen from having been in club work, I miss my guess. We business men in Caruthersville are behind such work to the limit."

Other men expressed themselves as favorably. S. E. Juden, editor of the Democrat, Argus said, "I see hopes for agriculture if we continue to work through the coming generation. Though these club members have in many cases produced more cotton at less cost to the acre than any of our best farmers of the county, we have touched another side of their lives through their club associations, the side of social contact and how to get along with their neighbors. This probably is of more importance than learning how to grow more cotton to the acre.

Tell The World About It

By Mark Havenhill

The writer recently had the pleasure of a day's work in Lincoln County, Kansas, with County Agent S. D. Capper.

When I arrived at Lincoln Center I looked around for the customary khaki clad man and the ever present Ford, but they were missing. I noted a well dressed man with a white collar, creased trousers, and shined shoes, alight from a large Essex Coach —I took him for an oil promoter. He came direct to me, however, and introduced himself as County Agent Capper. I accused him of being an oil promoter and he only remarked "No, just a promoter of Better Agriculture; *a bigger* and *better job.*"

After a trip to the office, Capper said, "I want you to look at some signs which I am having made. I want to take the first one out with us today, if it is dry." We drove a few blocks to a shop where there were about 15 new signs drying in the sunshine. Capper looked them over, picked out one and said, "This is the one I want to take out and set today. What do you think of it?" It met with my approval.

We tied it on the running board of the Coach and rolled to the country. We stopped at the farm of Mr. Runge and did some work, and then we set the sign.

Capper says he has about 30 demonstrators like Mr. Runge and each one is going to have his sign up just as soon as possible. What is the use of putting on a demonstration and let no one know that it is a demonstration?

Capper has the right idea. Tell the world about it.

Waiting

(*From page* 8)

So with a sigh Knight decided to wait, thought that perhaps he was a man ahead of his day; and be it known it is as great a fault to be ahead of the times as to be behind.

He waited. Then he waited.

But placing little stock in the Emersonian creed about the rat-trap in the woods he did not expect the world to beat a path to his door. He and his little working model became familiar sights in the Haunts of Money—as familiar as Blind Tim with his hat full of leadless lead-pencils, tapping his slow, sightless way 'midst the throng.

At last Success met Knight coming around the corner and asked, "Where have you been all my life?"

To which Knight replied, I am told—and it sounds reasonable—"Don't ask a lot of fool questions! Get busy and shine my shoes!"

All of which proves that he was, like some of us, human—that his long wait had frayed the edges of his cosmic entity and wilted his courtesy.

HISTORY is replete with examples of The Wait that Won. Columbus, I am informed, waited—and won.

And as I write there sits in a little village a musket shot from Boston Common a man, his chin on his hands, thinking—and waiting, waiting.

He is an inventor. Not the wild and feverish, glaring-eyed type of inventor popular with fiction audiences, but as different from that popular conception as the fiction detective is from the real "fly cop." He is quiet, assured, patient. He is a skilled mechanic. There is a sincerity in his voice that calms all query and silences all doubt.

To two of his former inventions the world owes something it may never repay—and a certain group of eastern capitalists owe a great part of their fortune—their business is founded upon the ideas sprung from his brain. They made the money—he gets the credit, gets it where Nellie wears the beads and the bottle gets the cork.

Seven years ago this quiet man evolved, fructified and produced a new automobile engine that works—that eliminates all valves, carburetors, vacuum tanks, and piston rings. It is simpler than Watt's simple steam engine, which revolutionized transportation.

Models were made and operated—run in the busy offices of Wall Street money-bags without contaminating the air and without disturbing the *eclat* of the gilded dens.

The members of the money-bund said, "Why, the thing actually runs! How cute! Well!" then gazed out of the window.

To which the inventor retorted, "What did you expect it to do—give off perfumed gas, then explode into a pretty formation of stars like Payne's Fire Works!" And, grabbing the model, left. Who blames him?

Seven years served Joseph for Rachel; and seven years has this quiet man waited for his reward. He has invented the final, ultimate engine which will without doubt operate the world's cars a decade hence. Compared to it the motors of today are a complicated mess of flipping, flapping, moving, noisy, intricate parts.

His motor has all the complexity of a milk bottle. And yet the world raises its hands and says, Not yet. Wait a while. Be patient. You are too early.

THE trouble is, as Marie Ebner-Eschenbach pointed out, "We usually learn to wait only when we have no longer anything to wait for."

And those of us who yearn for some of the world's favors; who offer on bended knee to an unappreciative race of fellow men the best that is in us—brought to perfection—we swallow hard and tears fill our eyes when bidden, Wait.

The world wants what every man has—providing it is better and more valuable, more time-saving and energy-saving—that it makes two praties grow where but one spud grew before. Eventually all good things come to be accepted—often after the men who evolved them are ashes, worms and regrets.

But one thing is sure, patience is better than anxiety, waiting more productive than wailing under the weeping willows.

I remember a chap who once not long ago threatened me disaster, who promised me that his every working moment would be spent planning ways and means to upturn me, to "expose" me before the world, and generally to set me by the ears—a first grade, Class A, Number Ten, Stage-villain threat.

I laughed.

"I'll wait—and see," I retorted.

He went to the task with a vim—but overlooked two things, the first of which is, Every Knock is a Boost; and the second of which is this: That, in life, even as in the stage drama Virtue is rewarded and the Villain punished.

Knowing that I had the Virtue and he the Villainy I let him run riot. When the sediment formed in the fracas, and things had settled down, I was stronger than arsenic and he was weak as water. He lost friends—I gained them.

AND so, waiting and patience have value even as hand-maidens to vengeance. It pays to wait, contain your soul, and wonder, as you wait, what will wabble along next.

If you have something the world needs, you can afford to wait for recognition; if you have not you will have to wait anyway, and it won't make much difference a thousand years from now, either way.

One of the lessons man learns from life is this: Sit tight, let success come out of its hole, then grab it.

Fertilizers Crowd Out Undesirable Grasses

(*From page* 19)

Many factors other than the fertilizers have an effect. Our purpose here is chiefly to show how important it is to study the question of fertilizing hay and pasture lands. The best material to use, the amount per acre, and the results that can be expected from them, is a matter for local study. In general, however, if the growth of clover is unsatisfactory, we would recommend that some consideration be given the question of liming and the amount of potash that has been applied to the land; and if this has been insufficient, then it might well pay to make a test with fertilizers containing more potash. This is especially necessary if farmyard manure has not been used, and when farmyard manure is not available in sufficient quantities.

HAVE YOU REACHED THE TOP EDGE ON PROFIT FROM CELERY?

When you find a grower who isn't making all the profit he is entitled to—you generally find him plugging along in the same old way.

Successful growers of celery—those who are reaching the top edge on profit—are men who watch their markets, their crop problems and especially their soil.

You will see from the crop record below how Mr. Violet of Oklahoma County, Oklahoma, made $131.50 extra profit per acre. You will see that the extra profit was due to 10% potash used in a well-balanced mixed fertilizer.

But don't be satisfied with just reading these facts. Get more money in return for your work. Use high analysis fertilizer containing plenty of potash. Increase the earning-power of your soil.

Crop records of J. W. VIOLET, Oklahoma County, Okla.

Soil: Clay loam with clay subsoil	Yield per acre	Crop value at 50c. dozen stalks	Increase for fertilizer	Net increase for potash costing $6
Plot No. 1 not fertilized	1350 dozen stalks	$675	None	No potash used
Plot No. 2 fertilized *without potash*. 1000 lbs. per acre 8 per cent phosphoric acid, 5 per cent ammonia. (8–5–0)	1375 dozen stalks	$687.50	$12.50	No potash used
Plot No. 3 fertilized *with potash*. 1000 lbs. per acre 8 per cent phosphoric acid, 5 per cent ammonia, 10 per cent potash. (8–5–10)	**1650 doz. Stalks**	**$825**	**$150**	**$131.50** 10 per cent potash used.

Crop notes. Good stand on all plots. Plot No. 3 best in general appearance all through season.

FREE: A booklet called "Better Truck Crops" is now being mailed to growers. You'll find good information in it. Just write to the address below for it.

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